ANTERIOR ABDOMINAL WALL ENDOMETRIOMA: A DIAGNOSTIC CHALLENGE

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ABSTRACT

We are reporting a case of abdominal wall endometrioma (AWE) in a 32-year-old woman who had an 8 months history of lower abdominal pain and lump. The physical examination revealed an ill-defined mass without tenderness. Computed tomography (CT) showed an enhancing is odense mass at the level of umbilicus right to mid line in right rectus abdominis muscle. The patient was treated with a wide radical resection with a 1 cm margin. There was no postoperative complication. The histological examination confirmed endometriosis. The patient is now on regular follow-up and doing well without any recurrence, five months after her operation.

KEY WORDS: Abdominal wall; Endometriosis; Endometrioma

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INTRODUCTION

Endometriosis is defined as existence of functional endometrial gland and stroma (responsive to ovarian hormone stimulation) outside the uterine cavity. Endometriosis of abdominal wall is a rare condition and subtype of extra pelvic endometriosis.[1,2] Endometrioma is a well circumscribed mass of endometriosis. Abdominal wall endometrioma usually occurs as a secondary process involving a surgical scar. Since the diagnosis of scar endometrioma is rarely established prior to surgery. Endometriosis should be included in the differential diagnosis of masses of the abdominal wall. We herein report a recent case of abdominal wall endometrioma as a reminder to the general surgeon to be attentive in the diagnosis of at risk patients.

CASE REPORT

A 32-year-old woman (Para 3, live 1) presented in surgery OPD with a 8 months history of pain and lump in lower abdomen on right side near umbilicus that had become progressively worse over the preceding two months. The pain was cyclical beginning few days prior to menses. She had undergone a caesarean section at full term one year ago. The physical examination revealed a well healed lower transverse supra umbilical scar. There was an ill-defined mass in the anterior abdominal wall which was approximately 4x4 cm in size, firm in consistency, fixed and non-tender. There was no discoloration of the skin. A clinical diagnosis of abdominal wall tumor was considered. A previous ultrasonography (USG) had shown a rather defined fusiform hypoechoic mass in the right of midline at the level of umbilicus with normal uterus and adnexa. CECT scan revealed an enhancing hyper dense mass (5x4x3cm) at the right rectus abdominis muscle. The subcutaneous fat was invaded, and the peritoneum was not involved.The patient was treated with a wide resection with a 1cm margin with a vertical incision (Fig.1). On exploration a firm mass of about 5x2 cm was found just below rectus sheath which was loosely adhered to the muscle. The mass was excised and sent for histopathological examination. Primary closure of the wound was done. Postoperative recovery was uneventful. The histological examination confirmed endometriosis (Fig.2, 3). After surgery, the patient has no medical treatment. The patient is now on regular follow-up and four months after the operation is doing well without any recurrence.

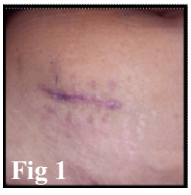
Fig 1

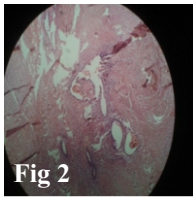
Fig 2

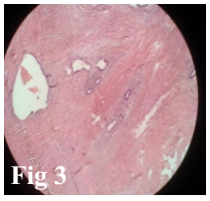
Fig 3

Figure 2, 3: Photomicrograph show fibro muscular tissue containing numerous round , tubular and dilated gland lined by columnar epithelium with mitosis and stratification of nucleus

DISCUSSION

The most common site of endometriosis is the pelvis, like uterus, ovaries, pouch of Douglas, uterine ligament, rectovaginal septum, uterine cervix, and inguinal hernial sac. The extrapelvic sites include the rectosigmoid, ileum, appendix, lungs, gallbladder, bowel, kidneys, central nervous system, extremities, perineum, and abdominal wall.[3-4] Postoperative endometrioma occurs most commonly after surgical procedures on the uterus and fallopian tubes. Several pathophysiological theories for endometriosis have been suggested. These are embryonic rest from Mullarian duct or Wolfian body in adult, invasion of endometrial diverticula to adjacent structures, metastasis by blood or lymph, metaplasia due to inflammatory reaction, reversion of common coelomic analge tissue from hormonal influence, retrograde menstruation through fallopian tube or traumatic implantation.[5,7] The most likely explanation is iatrogenic implantation of endometrial tissue during surgery, particularly caesarean sections. The incidence of endometriosis after caesarean section ranges from 0.03% to 0.45% While anterior abdominal wall endometriosis is reported approximately up to 4%.[1,4] Primary cutaneous endometriosis has also been documented at sites such as the umbilicus, vulva, perineum, groin, and extremities. It may also occur following lymphatic or vascular transplantation or metaplasia.[4]

The clinical presentation of AWE is a painful mass within or adjacent to a surgical scar. The pain is usually intermittent and associated with the patient's menstrual cycle but may be constant in nature. The overlying skin may be hyperpigmented due to deposition of hemosiderin but no hyperpigmentation was noticed in this case. The interval from original surgery to onset of symptoms has been recorded as anywhere from six months to 20 years.[1] In this case the interval was 8 months. A gynecological examination is recommended because a concomitant pelvic endometriosis may be encountered in patients with AWE. The differential diagnosis for abdominal wall endometrioma may include desmoid tumor, hernia, suture granuloma, hematoma, cyst, abscess, sarcoma and/or metastatic carcinoma.

An USG evaluation can determine the size of the lesion and helps to differentiate from solid to cyst. It also helps to exclude underlying intra-abdominal pathological factors. The sonographic appearance of endometrioma is nonspecific and may change during the course of the menstrual cycle. A CT

usually appears as a circumscribed solid or mixed mass, enhanced by contrast, and may show hemorrhage. Similar CECT finding was observed in the present case which showed contrast enhancing lesion. The MRI shows a low signal within the mass but could not be done in present case. The different imagings are nonspecific[2,.6,8] but useful in determining the extent of the disease, and assisting in the planning of operative resection. Fine-needle aspiration may be used to diagnose endometrioma in isolated cases but should be used only with caution as needle tract endometriosis has been reported.[3]

The treatment of choice is wide excision with a 0.5 to 1cm margin. Care must be taken not to rupture the mass to avoid re-implantation of microscopic remnants of endometrial tissue. Complete excision may necessitate a synthetic mesh placement or tissue transfer for abdominal wall closure. This case did not require synthetic mesh as primary closure was possible. Recurrences have been associated with larger and deeper lesions that were difficult to remove completely. Medical management with hormonal therapy may produce only temporary alleviation of symptoms, with extreme adverse effects followed by recurrence after the cessation of drugs.

The pathogenesis of AEW is direct inoculation of endometrial tissue during surgery. So it is recommended to follow good surgical technique during caesarean section including irrigation of surgical site, using sponges to separate uterine cavity and skin wound before abdominal wall closure.[9-10] Surgeons should also be aware that endometrial carcinomas have been reported.

CONCLUSION

AWE is a rare condition and unfamiliar to most of surgeons. In the era of increasing caesarean section even rare condition like AWE might be getting common. Clinical presentation and imaging studies may not be sufficient for diagnosis but clinical suspicion may help in diagnosis. It must be considered in differential diagnosis in women of child bearing age with painful abdominal wall mass.

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